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21 September 2021
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Meeting of the MED POL Focal Points

Teleconference, 27-28 May and 6-7 October 2021

Agenda item 15: Methodologies and techniques for the assessment and monitoring of adverse impacts of dumping activities

Proposal for way forward on implementation of Dumping Protocol pertaining to emerging issues of concern

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MEDITERRANEAN ACTION PLAN

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Joint Meeting with IMO-LC/LP on Sharing the Best Practices on Implementation, Compliance and Enforcement related to Dumping Protocol

Meeting held by Videoconference, 02 March 2021

Agenda item 3: Results of The Questionnaire and Main Findings

Results of The Questionnaire and Main Findings

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UNEP/MAP
Athens, 2021

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1. Introduction

1. The 21st Ordinary Meeting of the Contracting Parties (COP-21) to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols (Naples, Italy, 2-5 December 2019) adopted Decision IG.24/10 which called for updating of the Annexes of Dumping Protocol.

2. Further building up on document UNEP/MED WG.473/5/Rev1¹ submitted to the Meeting of the MED POL Focal Points (Istanbul, Turkey, 29-31 May 2019), UNEP/MAP- MEDPOL has prepared this document examining the potential issues of concern and emerging issues, brought to the attention of the Contracting Parties, regarding current and future implementation of the Dumping Protocol, as well as providing some recommendations of short, medium and long term to enhance the implementation of the Dumping Protocol.

3. The Objective of this document is to assess the potential issues of concern for the implementing of the Dumping Protocol by taking into account the current state of art at national level and global level and to evaluate and propose some recommendation on how the Contracting Parties could consider addressing these issues in short, medium and long perspective.

4. The document aims to present main findings stemmed from the responses of Contracting Parties to the Questionnaire which brings forward any critical issues in Mediterranean regions and fuel the future discussion on the way forward during the new Midterm Strategy of UNEP/MAP which is currently under preparation and will be submitted to the COP22, Antalya Turkey.

5. These issues presented in this document can be addressed in a variety of ways subject to the decision of the Contracting Parties and depending on the issue concerned such as (a) addressing them by updating the documents, i.e., Dumping Protocol and its Annex; (b) preparing guidelines for better implementation or (c) providing best practices to showcasing good solutions which are already tested and implemented.

1.1. Methodology

6. This document is built on the results and findings of a two-fold approach which are streamlined to the Mediterranean specific perspective by taking into account the previous Decisions of COPs and guidelines adopted by the Contracting Parties in their deliberations in various COPs:

- (a) Conduct and evaluate a specific Questionnaire circulated by on 17 December 2020;
- (b) Conduct a desk study on available literature;

7. The circulated questionnaire was focusing to identify regional and global best practices on implementation of the Guidelines for Dredged Materials with a focus on the areas: (a) selection and assessment of potential dredge sites; (b) permitting conditions, compliance and enforcement; and (c) application of innovative technologies for pollution prevention and monitoring of dumping of dredged material activities as well as (d) spotting any issues raised by the Contracting Parties.

8. The desk study was focusing on potential issues of concern and emerging issues regarding implementation of the Dumping Protocol, in particular related to dredging material, including marine litter, dredging for pipelines, emerging contaminants, etc., taking into consideration work undertaken by UNEP/MAP in particular with (i) the Updated Guidelines on Management of Dredged Materials; and (ii) the Guidelines for The Dumping of Inert Uncontaminated Geological Materials as well as other global and regional documents under LP/LC, OSPAR and HELCOM.

¹ Updating the Annexes to the Pollution-Related Protocols to the Barcelona Convention for the LBS, Hazardous Waste and Dumping Protocols.

2. Results from the Questionnaire

9. The questionnaire was answered by eleven Contracting Parties i.e., Algeria, Bosnia and Herzegovina, Cyprus, France, Spain, Israel, Italy, Montenegro, Monaco, Tunisia and Turkey until the extended deadline as of 25 January 2021.

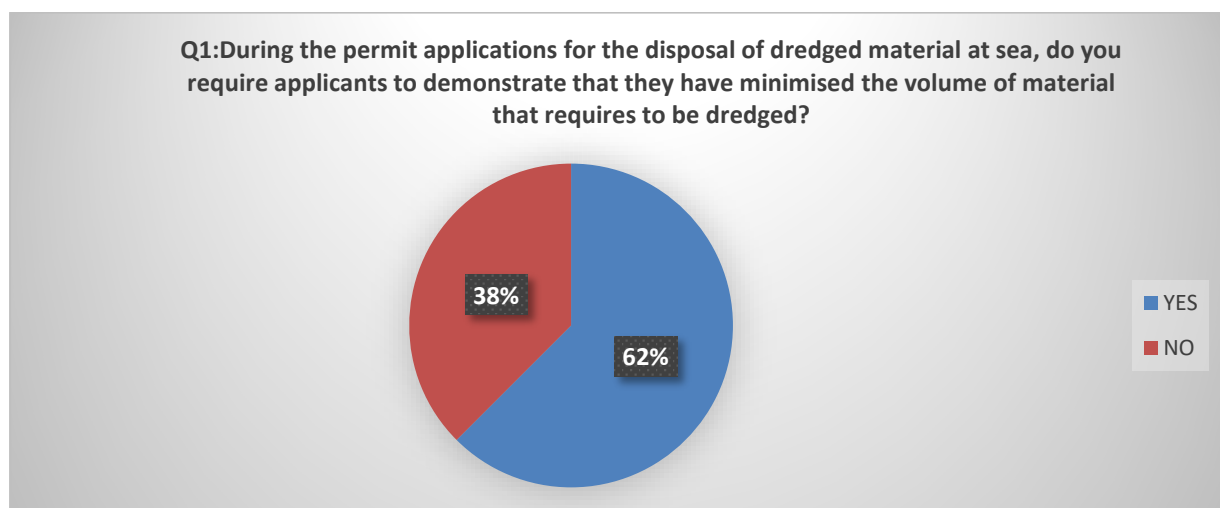
10. The following evaluation is made on the responses of the Contracting Parties. It should be kept in mind that some of the Contracting Parties left some of the questions blank, however the graphs are plotted over the total number that responded i.e., eleven in total, even though some particular questions did not have any responses from some Contracting Parties.

11. Explanations below the graph is to summarize the general findings based on the responses.

2.1. Responses

A. Assessment of wastes or other matter that may be considered for dumping

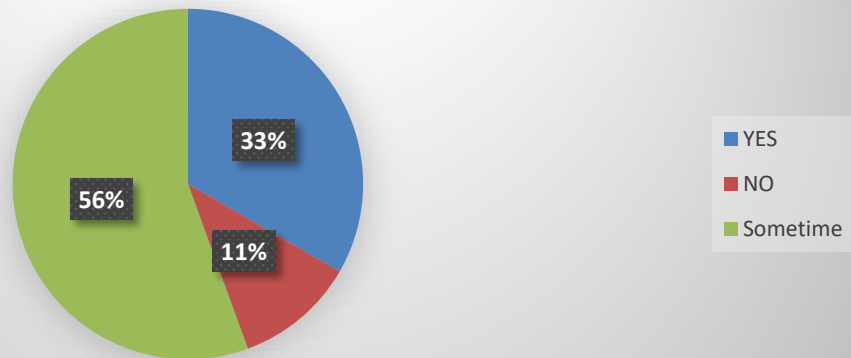
Consideration of Waste Management Options



While 62% are indicated as having responded 'Yes' to Question 1, the text responses generally do not indicate an explicit requirement for applicants to have demonstrated this nor how the permitting authority judges that this has been done satisfactorily.

This is an issue requiring applicants to demonstrate that they have minimised the volume of material that requires to be dredged and should be able to be achieved relatively straightforwardly as explained in the Guidelines.

Q2: Is dredged material used beneficially (i.e. other than disposal at sea) in your country - as covered in paragraphs 65-99 of Part A of the UNEP/MAP Updated Guidelines for the Management of Dredged Material?



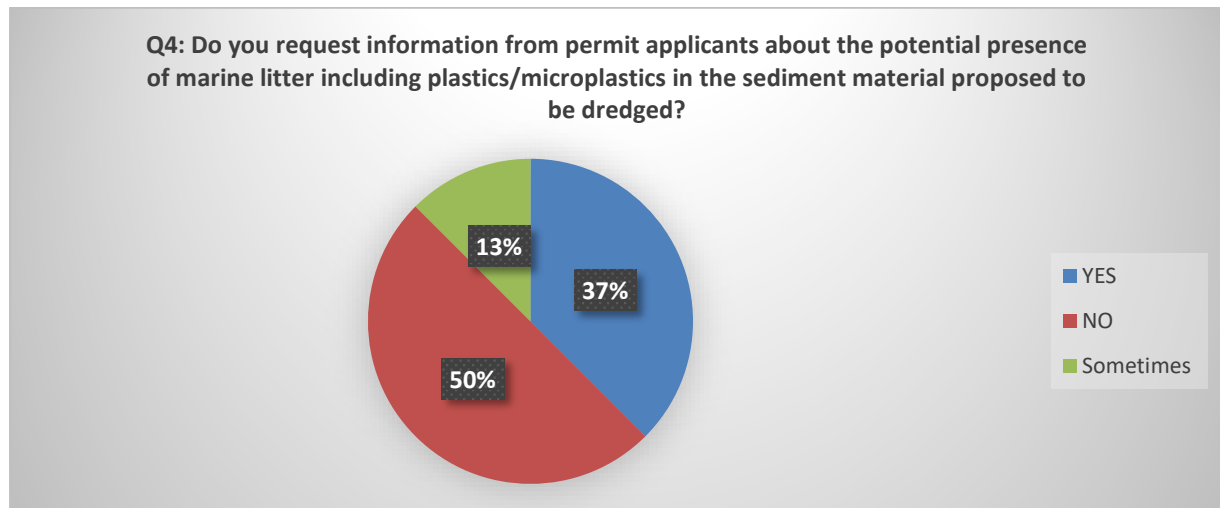
The responses indicate that the vast majority of Contracting Parties who responded do use dredged material beneficially at least some of the time. A variety of uses were identified with beach nourishment being the most commonly used one and also construction uses.

Dredged Material Characterisation

Q3: Which biological properties and effects of dredged material (as in Tier III of Appendix 1 of the Updated Guidelines for the Management of Dredged Material), form part of the assessment of dredged material characteristics prior to dumping? (Multiple an

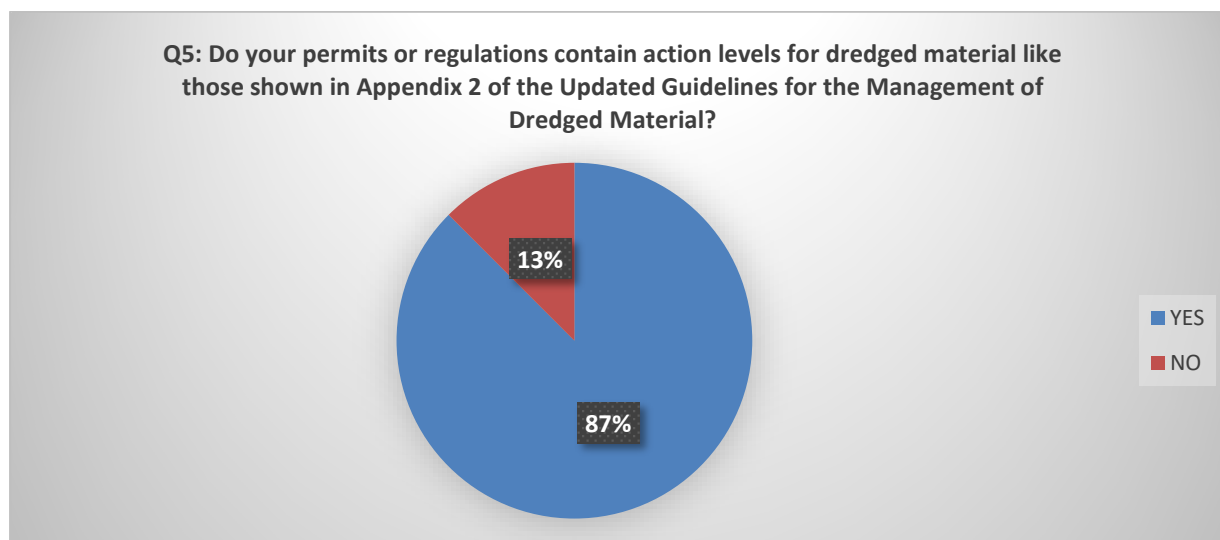


Most Contracting Parties who responded used toxicity bioassays (7 out of 8) and/or biomarkers (3 out of 8). Only Algeria indicated that it used microcosm and mesocosm experiments.



Some of the Parties who responded did not request information from permit applicants about the potential presence of marine litter (including plastics/microplastics) in the sediment material proposed to be dredged. This would appear to be an issue where improvements can be made relatively easily to achieve best practice. This can be done by including a question on the permit application forms such as “Does the sediment proposed to be dredged contain litter/debris, in particular plastic materials? If so, how do you propose to minimise such material being dumped at sea?”

Action Levels

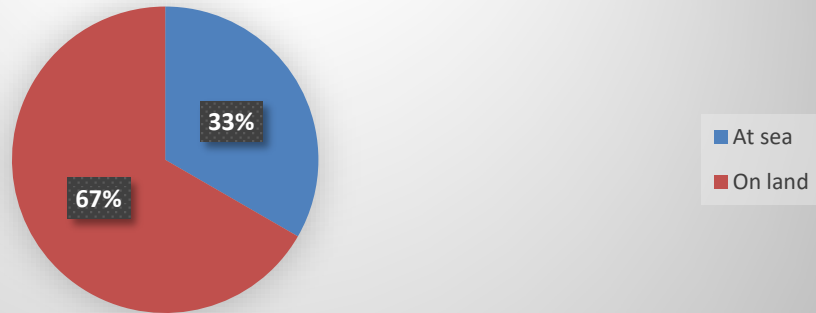


Most Parties had Action Levels for dredged material. Three Parties used toxicity testing to determine the acceptability or otherwise of dredged material for sea disposal when it exceeded upper threshold values. Two Parties appear to simply refuse sea disposal when upper thresholds are exceeded and with 3 Parties it was unclear how decisions were made.

Q.6 When national action levels are exceeded, how do you decide whether dumping should be permitted or not?

Almost all Parties had Action Levels for dredged material. Four Parties used toxicity testing to determine the acceptability or otherwise of dredged material for sea disposal when it exceeded upper threshold values. Two Parties appear to simply refuse sea disposal when upper thresholds are exceeded and with 3 Parties it was unclear how decisions were made.

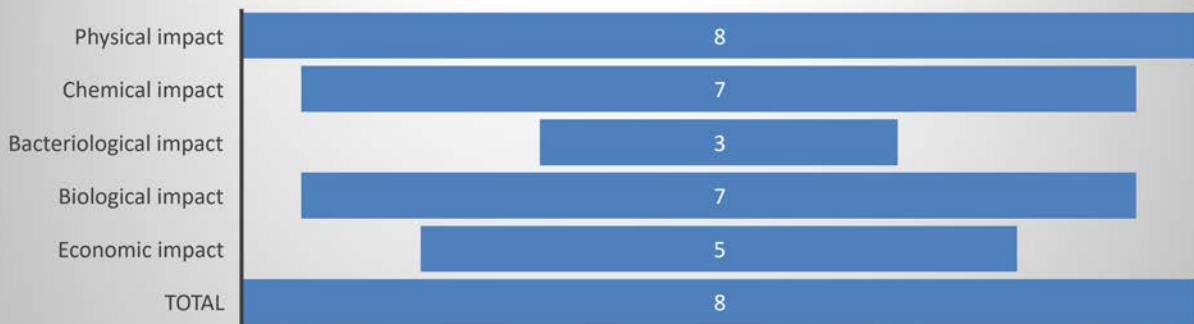
Q7: If the dredged material cannot be dumped at sea unconfined due to contamination or other reasons, which management/mitigation techniques are employed?



Five Parties appear to simply exclude contaminated material from sea disposal while 3 others would allow sea disposal under some conditions, although one of those latter Parties conditions for allowing sea disposal are unclear.

Selection of existing dredged material disposal (dumping) sites for new or repeat permits

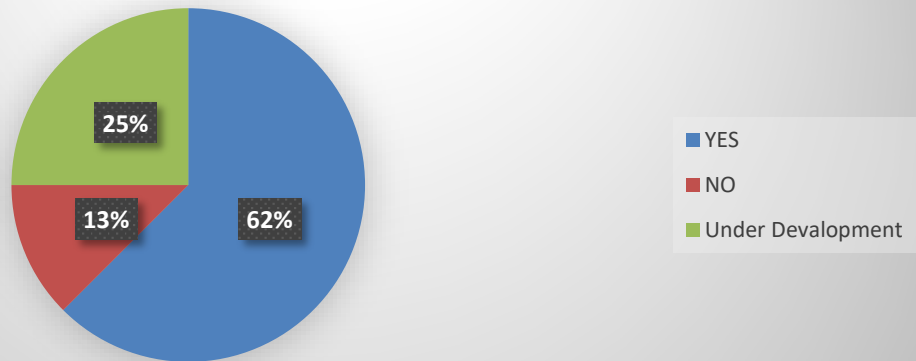
Chart Q8: Which biological properties and effects of dredged material (as in Tier III of Appendix 1 of the Updated Guidelines for the Management of Dredged Material), form part of the assessment of dredged material characteristics prior to dumping? (Multiple answers available)



Four Parties consider the full range of potential types of impacts, 3 Parties only omit considering bacteriological impacts while 2 Parties says they do not consider economic impacts. Overall, the Parties who responded use a satisfactory range of considerations for this question.

Selection of and assessment of potential new dredged material disposal (dumping) sites

Q9: Do you have an agreed procedure/best practice for the selection and assessment of potential new dredged material disposal sites?

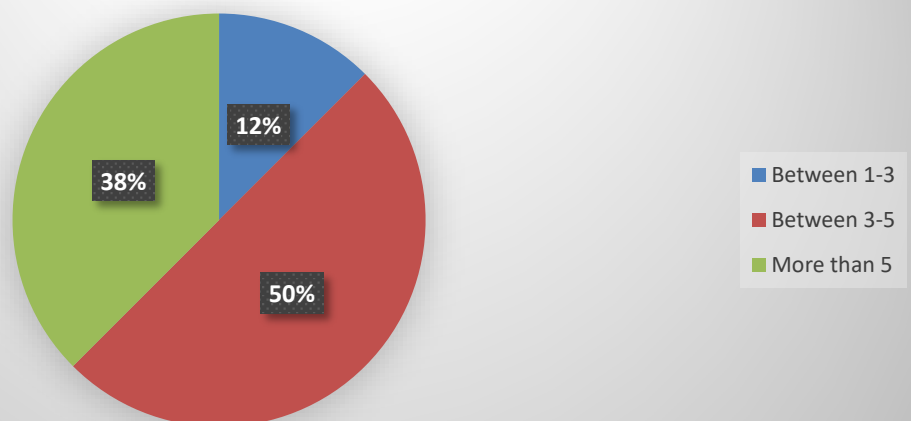


3 of the 10 Parties who responded did not have an agreed procedure/best practice for the selection and assessment of potential new dredged material disposal sites. One of the Parties who responded that they did have an agreed procedure/best practice for the selection and assessment of potential new dredged material disposal sites did not appear to include any seabed considerations in its procedure.

Q.10 In the absence of an agreed procedure/best practice for the selection and assessment of potential new dredged material disposal sites, what baseline surveys and assessments would usually be carried out for selecting a new dredged material disposal site?

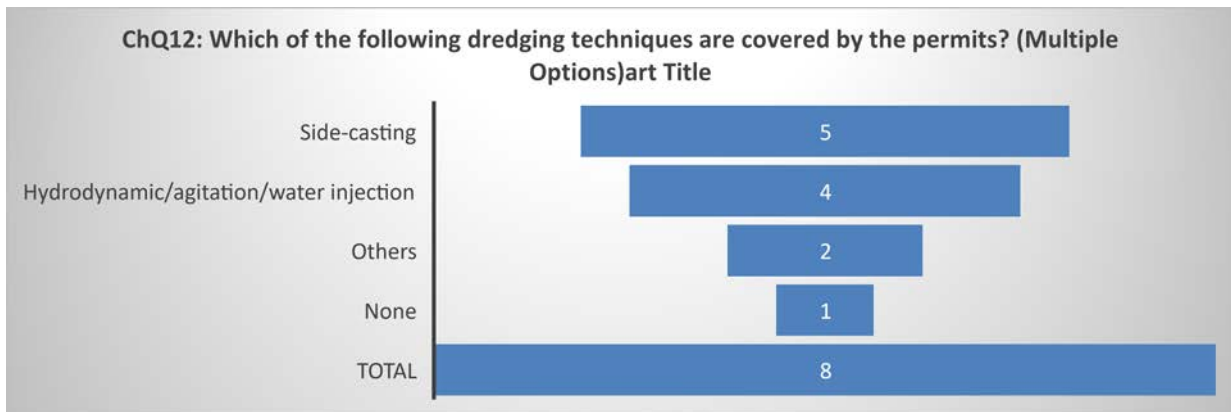
One Party who did not have an agreed procedure/best practice for the selection and assessment of potential new dredged material disposal sites said that it had not done any baseline surveys and assessments in order to select a new dredged material disposal site. However, it was not clear that it had actually selected a disposal site without such surveys/assessments. Two other Parties who said they did not have an agreed procedure nevertheless carry a comprehensive set of surveys prior to selecting a disposal site. Overall, almost all of the Parties who responded appeared to implement satisfactory procedure for the selection and assessment of potential new dredged material disposal sites.

Q11: What national and local authorities or other organisations would normally be consulted during the process for the selection and assessment of potential new dredged material disposal sites? (open ended)



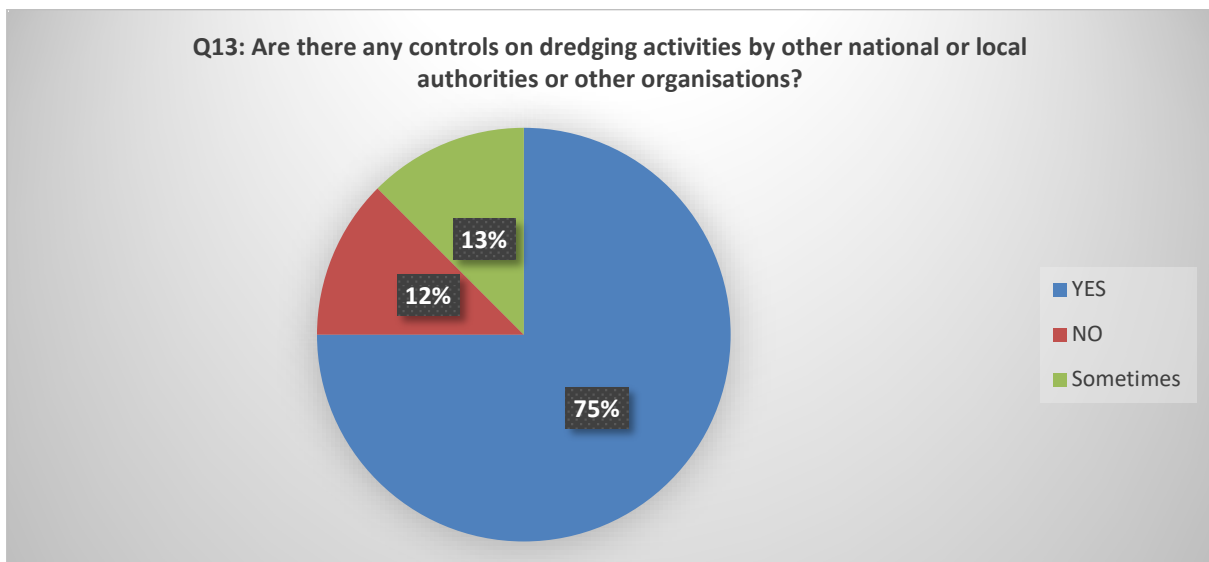
Almost all Parties who responded appear to rely almost exclusively on consultations with national and local authorities, although it would appear that one Party may be able to involve other experts. 1 Party appeared to consult the general public/NGOs.

Permits



If 'Others', please detail what techniques are covered.

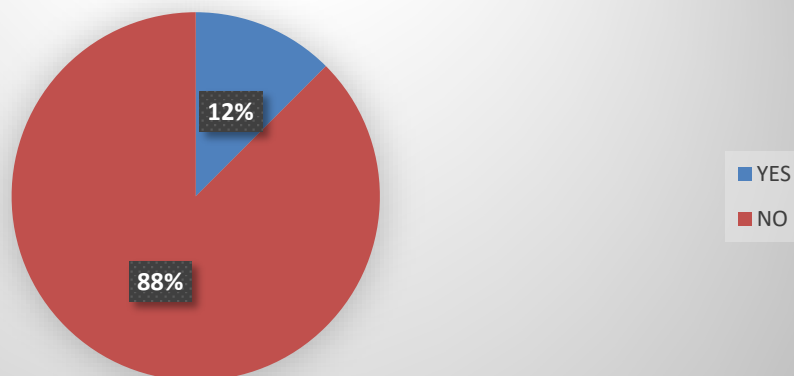
Almost all Parties appear to cover all the relevant dredging techniques under their permits.



If 'Yes' or 'Sometimes', please provide details of the type of controls and other relevant national or local authorities involved.

All but 1 of the Parties state that other national or local authorities exert controls on dredging at least sometimes.

Q14: Do you have national procedures for issuing dumping permits under Article 9 of the Dumping Protocol i.e. "in a critical situation of an exceptional nature"?

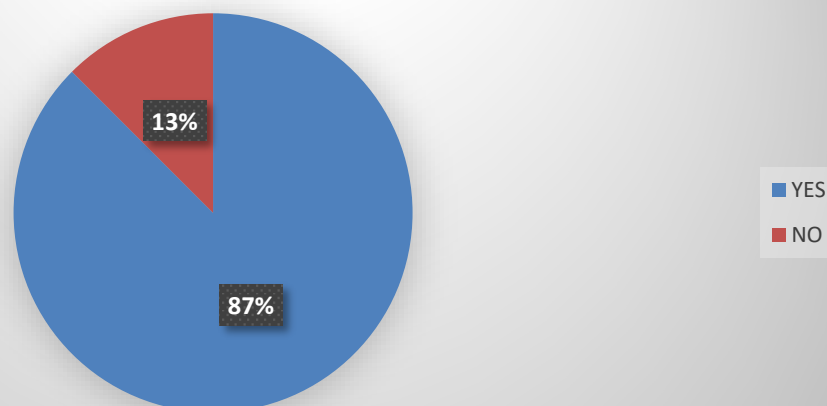


If 'Yes', please provide examples of such permits issued in the last 5 years.

Only 1 Party has a national procedure for issuing dumping permits under Article 9 of the Dumping Protocol i.e. "in a critical situation of an exceptional nature. This is an obvious area for needed improvement if the 1995 Dumping Protocol is to come into effect, unless Parties decide simply not to issue such permits in such circumstances.

Permit conditions

Q15: Can permits have conditions restricting the timing of dredging and/or the disposal of dredged material at sea for any reasons?

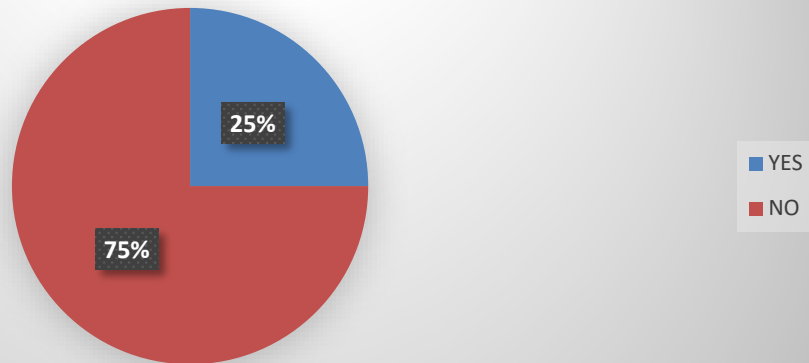


If 'Yes', please provide details of the types of permit conditions involved.

All but one Party stated that their permits can have conditions restricting the timing of dredging and/or the disposal of dredged material at sea. A variety of reasons for such conditions were

mentioned by 5 Parties but the other Parties did not provide details of the types of permit conditions involved.

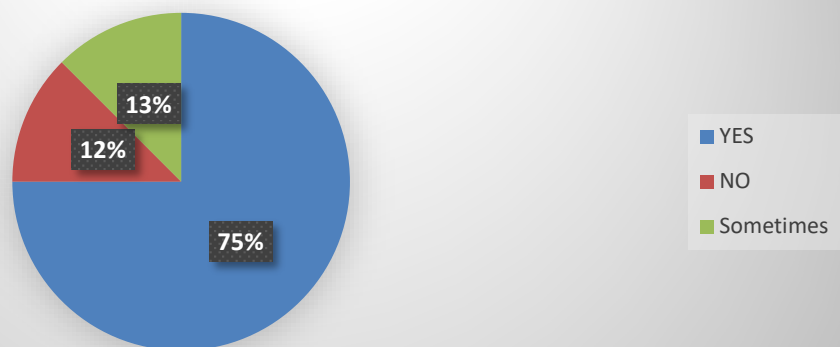
Q16: Do permits have conditions requiring dredging vessels to have gratings/grids or other devices to trap large items of marine litter/debris?



If 'Yes', please provide examples of the types of permit conditions.

5 Parties responded that their permits have conditions requiring dredging vessels to have gratings/grids or other devices to trap large items of marine litter/debris. Given the current concerns with marine litter and the ready availability of gratings/grids for at least some types of dredging (particularly mechanical dredging), this should be an area where all national authorities would be able to adopt such permit conditions relatively easily.

Q17: Do permits have conditions requiring the implementation of mitigation measures during and/or after dredging and/or dumping operations:



All but 2 of the Parties permits can have conditions requiring the implementation of mitigation measures during and/or after dredging and/or dumping operations. A number of Parties mention well known mitigation techniques such as silt curtains and careful deposition of dredged in specific locations. 3 Parties mention monitoring as a mitigation technique. However, monitoring is not a mitigation technique since mitigation is defined as measures taken to minimise or remedy impacts.

Q18: Do permits have conditions requiring the field monitoring of the environmental effects of dredging activities?



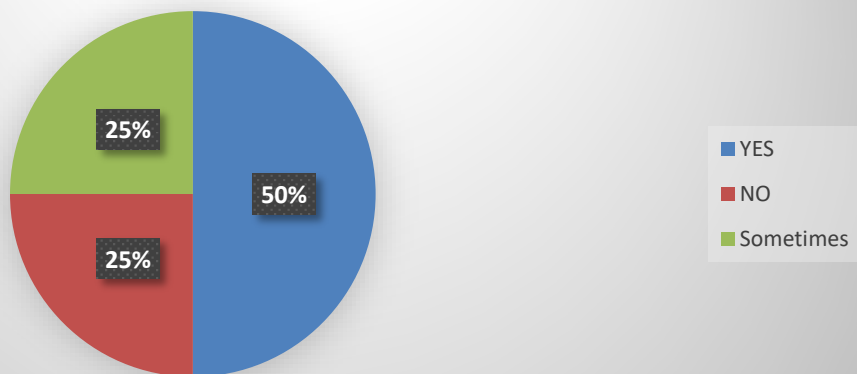
If 'Yes' or 'Sometimes', please provide examples of the typical monitoring requirements.

All but 1 of the Parties permits can have conditions requiring the field monitoring of the environmental effects of dredging activities. The level of dredging activity by the Party that does not have such conditions is unknown.

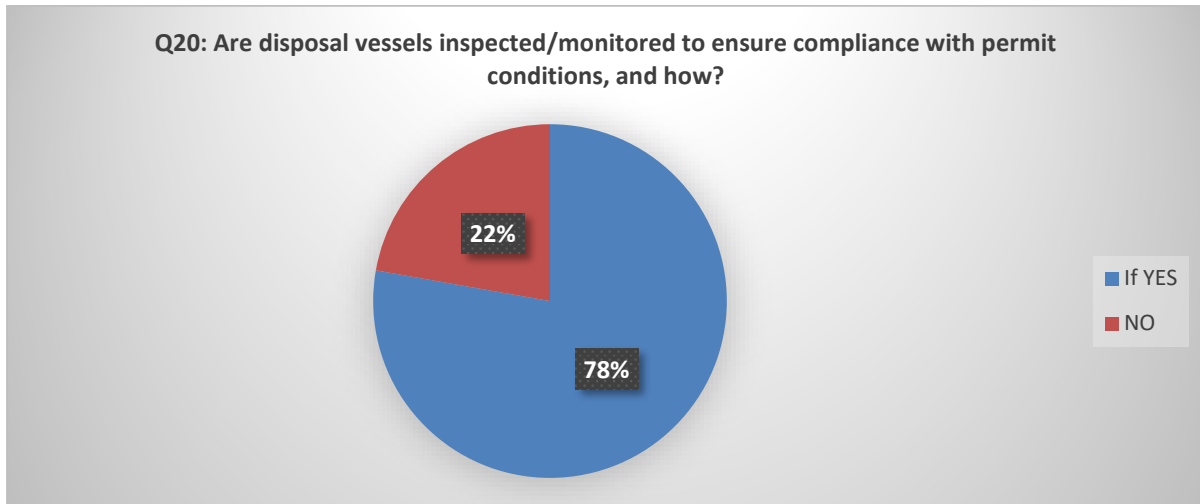
A variety of monitoring is mentioned but further investigations would be required to establish in detail the monitoring carried out by most Parties.

Compliance monitoring - Used to establish whether the dumping permit conditions have been respected and consequently have, as intended, prevented adverse effects on the receiving area as a consequence of dumping

Q19: Are permit holders offices visited by inspectors to check records related to activities covered by permits?



Most Contracting Parties have inspectors visit the offices of permit holders to check records related to the activities covered by permits.



If 'Yes', is that inspection/monitoring carried out by:(select one or more options below)



All but 2 of the Parties inspect/monitor disposal vessels to ensure compliance with permit conditions. Most of them either inspect the vessels in docks/harbours or monitor their track to disposal sites through AIS data. A smaller number either have inspectors on board the dumping vessels or observe the dumping vessels from another vessel. No Parties use 'black boxes' to monitor the activities of dumping vessels.

Field monitoring

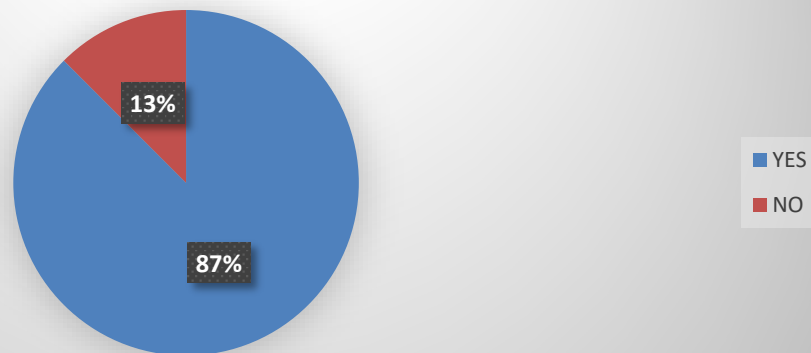
Used to:

- to improve the basis on which permit applications are assessed by improving knowledge of the field effects of major discharges which cannot be directly estimated by a laboratory evaluation or from the literature;
- to provide the necessary evidence to demonstrate that within the framework of the Protocol the monitoring measures applied are sufficient to ensure that the dispersive and assimilative capacities of the marine environment are not exceeded, and so dumping operations do not cause damage to the environment and deteriorate GES.

Q.21 Who does the monitoring of the dredged material disposal sites and at what frequency?

Question	No. of Responses	ALB	DZA	BIH	HRV	CYP	EGY	FRA	GRC	ISR	ITA	LBN	LBY	MLT	MCO	MNE	MAR	SVN	ESP	SYR	TUN	TUR
By the permitting authority or their agents?																						
- No	4					X					X				X				X			
- Every 6 months?	0																					
- Annually?	3		X							X	X											
- Occasionally	1															X						
By permit holders or their agents?																						
- No	1															X						
- Every 6 months?	3					X					X										X	
- Annually?	3							X		X					X							
- Occasionally	3					X					X								X			

Q22: As monitoring conditions are expensive, it is generally accepted that monitoring programmes need to be carried out in a resource-effective manner with clearly defined objectives, with measurements that can meet those objectives and that the results a



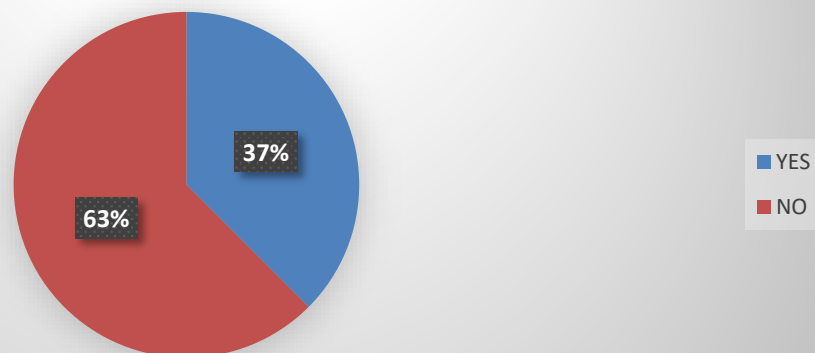
Q.23 How are decisions made about prioritising which disposal sites require monitoring and on what frequency?

Some Parties monitor disposal sites regularly e.g., every 6 months or annually while other monitor disposal sites when large quantities of dredged material have been dumped. 1 Party requires all disposal sites to be monitored every 5 years. Other than that, in general there does not appear to be a decision process for prioritising which disposal sites require monitoring.

Q.24 If monitoring is carried out, please provide details of the typical monitoring activities carried out at dredged material disposal sites:

2 Parties responded that no monitoring had been done as yet but it is unknown over what timescale that refers to. 1 Party appears to only monitor the water column for a range of parameters. The other 6 Parties carry out comprehensive monitoring of both water, sediment and biology.

Q25: Do these monitoring activities include the observation and analysis of marine litter (Macro and /or Micro Litter) at dredged material disposal sites?



If 'Yes' or 'Sometimes', please provide details of the types of litter found and their suspected sources.

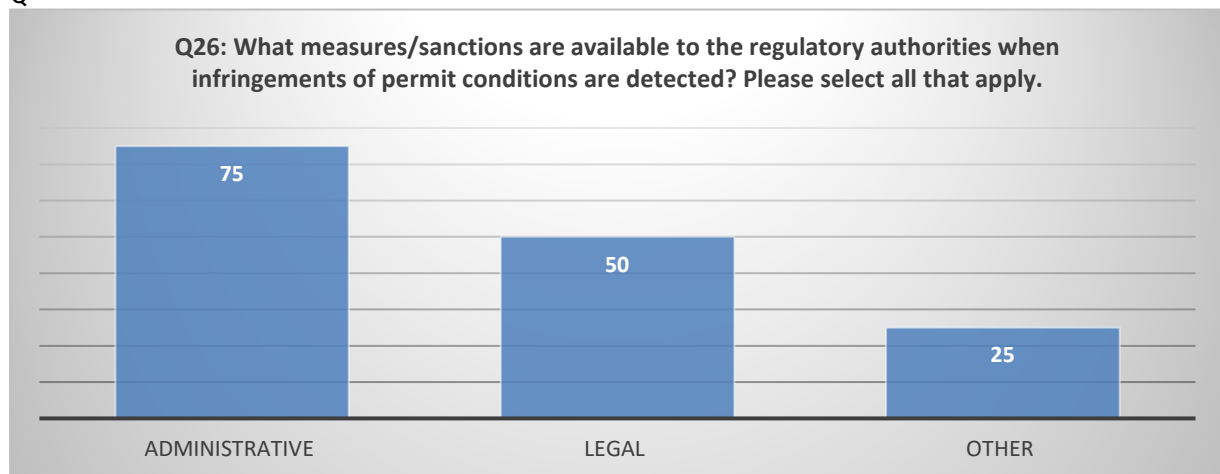
Only 4 out of 10 Parties include the observation and analysis of marine litter (Macro and /or Micro Litter) at dredged material disposal sites.

Where monitoring takes place, it should be fairly straightforward to include observations of macro-litter (including plastics) on the seabed. This can be done with epibenthic trawls or similar devices. Monitoring for micro-plastics is more complex as it involves extracting the micro-plastics from sediments before any identification or quantification can take place. The paper 'Common methodologies and techniques for the assessment and monitoring of adverse impacts of dumping

activities' (UNEP/MED WG 484/3) refers to the monitoring of micro-plastics in sediment. There are as yet no generally accepted methodologies for such monitoring but the GESAMP report referred to in the above paper makes proposals for such methodologies.

Enforcement

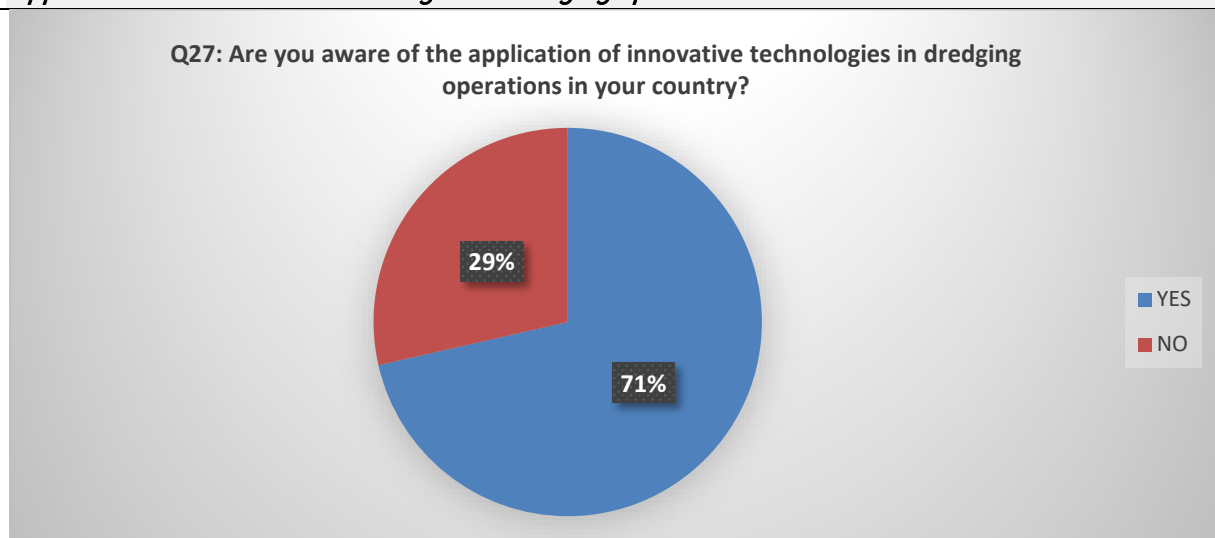
Q



Most Parties use either administrative or legal sanctions when infringements of permit conditions are detected.

B. Innovative technologies:

Application of innovative technologies in dredging operations



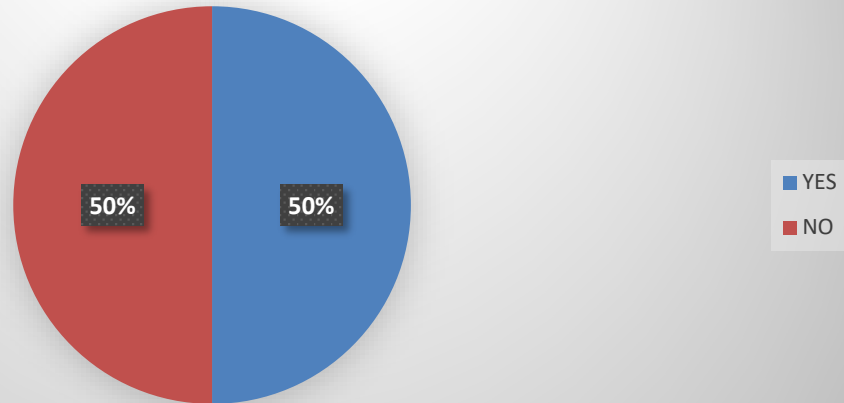
If 'Yes', please provide details of those innovative technologies.

The innovative technology mentioned included:

- Ecological dredging mentioned by 2 Parties
- Water injection dredging (JetSed) by 1 Party
- Vacuuming/pumping technologies that minimise turbidity and pollution by 1 Party.

Application of innovative technologies for pollution prevention relevant to dredged material activities

Q28: Are you aware of the application of innovative technologies for pollution prevention relevant to dredging and dredged material activities in your country?



If 'Yes', please provide details of those innovative technologies.

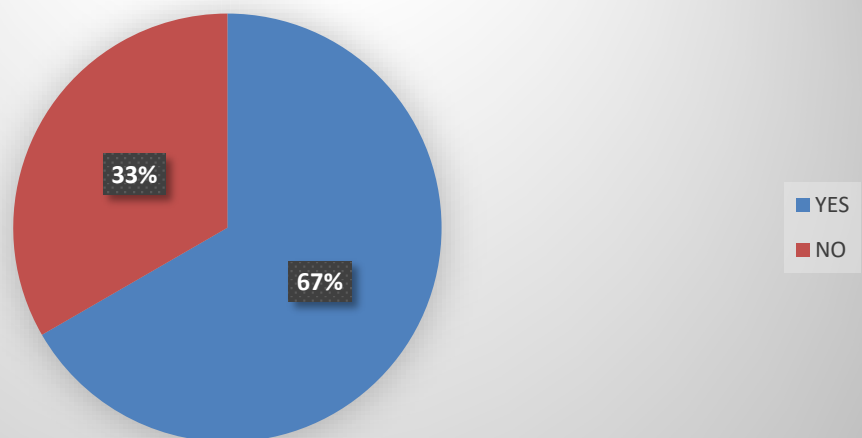
In addition to the responses to Q27, the innovative technologies mentioned by Parties were:

- the use of sea turtle friendly dredgers,
- airborne drones to monitor turbidity extent,
- bubble curtains to minimise the spread of turbidity,
- environmental valves on dredgers, and
- vacuuming/pumping technologies that minimise turbidity and pollution.

However, the use of Automatic Identification System (AIS) data to monitor the disposal location used for disposal of dredged material can be considered innovative.

Application of innovative technologies for monitoring of dumping of dredged material activities

Q29: Are you aware of the application of innovative technologies for the monitoring the dumping of dredged material in your country?



If 'Yes', please provide details of those innovative technologies.

1 Party mentioned the use of satellite images and drones for monitoring turbidity, another the use of AIS (see above), 2 Parties mentioned the use of passive samplers for contaminant monitoring and 1 Party the use of remotely controlled sensors.

C. General

Q.30 Please describe any challenges you face during the selection of disposal sites, permitting, monitoring of dredged material etc.

Seven Parties mentioned challenges they faced during the selection of disposal sites, permitting, monitoring of dredged material etc. including:

- Lack of an overall strategy/master plan for managing the disposal, re-use etc of dredged material.
- The absence of detailed knowledge on the real environmental impacts both the dredging and the material disposal.
- Selection of disposal sites when there is no ideal site, particularly where it is difficult to reach agreement with stakeholders.
- Funding issues for regulatory authorities to carry out monitoring.

One Party mentioned the difficulty in having available the appropriate dredging equipment for the conditions of the site and that innovative equipment may not be available to them.

Another Party stated that the challenges included:

- Having a database of environmental monitoring data for disposal sites would be beneficial.
- A database with details for all disposal sites, including those not selected, would also be beneficial.

They also stated that there were questions about:

- Whether dispersive or retentive sites should be used
- Whether disposal sites impacted on the hydro-sedimentary functioning of an estuary e.g., would disposal of sediment outside the estuary impact on its sediment budget.
- Local acceptability of disposal sites.
- Defining monitoring adapted to the local context.
- Some monitoring requests being of a political nature e.g. for public reassurance when they were not seen as necessary from a scientific perspective.

Q.31 Is there any additional information you wish to submit?

There was a suggestion that there was a need to allow dumping brines at sea which would not currently be allowed under the 1995 Dumping Protocol.

It was also suggested that consideration should be given to adding the "dumping" of artificial reefs and man-made structures or equipment for research purposes (short term) to the list of allowed wastes. However, note that such activities are regarded as placement that does not fall under the definition of dumping.

Issues that Parties were currently working on or considering included:

- Considering emerging contaminants and microplastics
- Putting in place thresholds for the disposal of polluted sediments
- Consider geochemical funds to regionalize thresholds
- Creating economically viable recovery channels for these sediments
- International guidance or legislation for the adequate use of management techniques, for example, on capping of contaminated sediment

3. Results of the research study

The research study examined and identified potential issues of concern and emerging issues regarding implementation of the Dumping Protocol, in particular related to dredged material, including marine litter, dredging for pipelines, emerging contaminants, etc., taking into consideration work undertaken by other global and regional organizations. The main findings of the study are given below:

1. **Sustainable Development** –The Updated Guidelines for the Management of Dredged Material should incorporate text urging Contracting Parties to integrate dredging and dredged material disposal within a sustainable development framework.
2. **Guidance on national implementation of the Dumping Protocol** – The Contracting Parties to the Barcelona Convention consider whether documents analogous to those adopted by the London Protocol Parties would be helpful, particularly for those Contracting Parties yet to ratify the Dumping Protocol.
3. **Addressing critical and force majeure dumping at sea (Articles 8 and 9 of the Dumping Protocol)** - The Contracting Parties to the Barcelona Convention should consider adopting guidance for Articles 8 and 9 of the Dumping Protocol taking into account ‘Procedures and criteria for determining and addressing emergency situations’.
4. **UNEP/MAP Guidelines for the assessment inert uncontaminated geological materials (UNEP(DEPI)/MED IG.16)** –The Contracting Parties to the Barcelona Convention should consider whether an analogous document to the LC/LP document ‘Eligibility criteria for Inert Inorganic Geological Material’ would be useful for Contracting Parties in implementing the guidelines for Inert Uncontaminated Geological Materials.
5. **UNEP/MAP Guidelines for the Dumping of Platforms and other Man-Made Structures at Sea (UNEP (DEC)/MED IG.15)** –The Contracting Parties to the Barcelona Convention and its Protocols should consider a review of these guidelines taking into account the recent developments such as LC/LP ‘Revised specific guidelines for assessment of platforms and other man-made structures at sea (2019)’.
6. **Marine litter** – The Contracting Parties to the Barcelona Convention should consider:
 - a) Carrying out a review of monitoring data from disposal sites to assess the extent of marine litter introduced by dumping at sea in the Mediterranean.
 - b) Carrying out an exploratory survey of microplastics in sediments at a range of dredged material disposal sites to provide some useful initial data on their prevalence.
 - c) Referring to marine litter as an issue to be considered in any revision of the Annex to the Dumping Protocol.
7. **Dredging for pipelines, cables and other infrastructure** - The Contracting Parties to the Barcelona Convention should consider whether the disposal of excavated dredged material from the dredging for pipelines, cables and other infrastructure can be covered by the Dumping Protocol. If not, then a specific amendment to the Dumping Protocol should be considered to ensure the effective management of the disposal or “temporary deposition” of excavated dredged material from dredging for pipelines, cables and other infrastructure.
8. **Underwater Noise** - Underwater noise should be referred to as an issue to be considered in relation to dredging and disposal in any revision of both the Annex to the Dumping Protocol and the Updated Guidelines on Management of Dredged Materials.
9. **Issues for the Updated Guidelines on Management of Dredged Materials – Biodiversity** – It is recommended that the 2006 CBD ‘Guidelines on biodiversity - inclusive Environmental Impact Assessment (EIA)’ be referenced in any revision of the Updated Guidelines on Management of Dredged Materials.
10. **Issues for the Updated Guidelines on Management of Dredged Materials – Emerging contaminants** - The Contracting Parties to the Barcelona Convention/UNEP-MAP Secretariat should monitor the on-going considerations about emerging contaminants within the EU, OSPAR, ICES and other relevant forums to be aware of emerging contaminants that are considered to be of concern, that

also associate with sediments and thus could be of concern with regard to the assessment of dredged material for disposal at sea.

11. **Disposal site selection and related monitoring** - The Contracting Parties to the Barcelona Convention and its Protocols should examine the final version of the LC/LP document 'Guidance for Selecting Sites for Sea Disposal and for Developing Site Management and Monitoring Plans' when it is available and consider whether there is a need to develop a revised version for the purposes of the Dumping Protocol.

4. Reports on the overlapping findings from the different elements of the study

The following elements occurred in more than one part of the research study:

- The best practice approach to integrate dredging and dredged material disposal within an overarching sustainable development framework.
- Incorporating consideration of marine litter in the assessment of dredged material prior to dredging and in the monitoring of disposal sites.
- Dredging for pipelines, cables and other infrastructure.
- Incorporating consideration of underwater noise in the assessment and monitoring of dredging and disposal of dredged material.
- Disposal site selection and related monitoring

5. Recommendations and way forward

1. Sustainable Development – It is recommended that the Updated Guidelines for the Management of Dredged Material should incorporate text urging Contracting Parties to integrate dredging and dredged material disposal within a sustainable development framework. This issue also is tackled in the Compendium of Best Practices in short term, before any update is considered in the Guidelines. This has been included in the 'Compendium of Best Environmental Practices for Implementation of Dumping Protocol' (document UNEP/MED WG.487/4).

2. Addressing critical and force majeure dumping at sea (Articles 8 and 9 of the Dumping Protocol) - It is recommended that the Contracting Parties to the Barcelona Convention should consider adopting guidance for Articles 8 and 9 of the Dumping Protocol by preparing Procedures and criteria for determining and addressing emergency situations as referred to in Articles 8 and 9 of the Dumping Protocol (1995).

3. UNEP/MAP Guidelines for the assessment inert uncontaminated geological materials (UNEP(DEPI)/MED IG.16) – It is recommended that the Contracting Parties to the Barcelona Convention should consider whether an analogous document similar to the LC/LP document 'Eligibility criteria for Inert Inorganic Geological Material' by taking into account the specificities of Mediterranean sea, would be useful for Contracting Parties in implementing the guidelines for Inert Uncontaminated Geological Materials.

4. UNEP/MAP Guidelines for the Dumping of Platforms and other Man-Made Structures at Sea (UNEP (DEC)/MED IG.15) – It is recommended that the Contracting Parties to the Barcelona Convention and its Protocols consider a review of these guidelines taking into account the recent developments such as LC /LP 'Revised specific guidelines for assessment of platforms and other man-made structures at sea (2019)'.

5 Marine litter

- a) It is recommended that Contracting Parties to the Barcelona Convention consider carrying out a review of monitoring data from disposal sites to assess the extent of marine litter introduced by dumping at sea in the Mediterranean.
- b) It is recommended that Contracting Parties to the Barcelona Convention consider carrying out an exploratory survey of microplastics in sediments at a range of dredged material disposal sites to provide some useful initial data on their prevalence.
- c) **Therefore**, it is recommended that marine litter should be mentioned as an issue to be considered in any revision of the Annex to the Dumping Protocol. This was proposed in document UNEP/MED WG.488/3 and accepted at the 'Meeting of the Working Group of Designated Experts for Reviewing the Annex to the Dumping Protocol' (document UNEP/MED WG.488/L.1). It has

also been included in the ‘Compendium of Best Environmental Practices for Implementation of Dumping Protocol’ (document UNEP/MED WG.487/4) and the ‘Common methodologies and techniques for the assessment and monitoring of adverse impacts of dumping activities’ (document UNEP/MED.WG.487/3).

6. Dredging for pipelines, cables and other infrastructure - It is recommended that the Contracting Parties to the Barcelona Convention should consider whether the disposal of excavated dredged material from the dredging for pipelines, cables and other infrastructure can be covered by the Dumping Protocol. If not, it is recommended that a specific amendment to the Dumping Protocol should be considered to ensure the effective management of the disposal or “temporary deposition” of excavated dredged material from dredging for pipelines, cables and other infrastructure. This has been included in the ‘Compendium of Best Environmental Practices for Implementation of Dumping Protocol’ (document UNEP/MED WG.487/4) and the ‘Common methodologies and techniques for the assessment and monitoring of adverse impacts of dumping activities’ (document UNEP/MED.WG.487/3).

7. Dredging - Underwater Noise- It is recommended that underwater noise should be mentioned as an issue to be considered in relation to dredging and disposal in any revision of both the Annex to the Dumping Protocol and the Updated Guidelines on Management of Dredged Materials. UNEP/MAP MEDPOL proposed this issues to be tackled in medium term via preparing or updating the guidelines, on the other hand, it is worth to explore best practices, if any in short term. This has been included in the Compendium of Best Practices (document UNEP/MED WG.487/4) and the ‘Common methodologies and techniques for the assessment and monitoring of adverse impacts of dumping activities’ (document UNEP/MED.WG.487/3).

8. Issues for the Updated Guidelines on Management of Dredged Materials – Biodiversity – It is recommended that the 2006 CBD ‘Guidelines on biodiversity - inclusive Environmental Impact Assessment (EIA)’ could be referenced in any revision of the Updated Guidelines on Management of Dredged Materials.

9. Issues for the Updated Guidelines on Management of Dredged Materials – Emerging contaminants - It is recommended that Contracting Parties to the Barcelona Convention/UNEP-MAP Secretariat should monitor the on-going considerations about emerging contaminants within the EU, OSPAR, ICES and other relevant forums to be aware of emerging contaminants that are considered to be of concern, that also associate with sediments and thus could be of concern with regard to the assessment of dredged material for disposal at sea.

10. Disposal site selection and related monitoring - It is recommended that the Contracting Parties to the Barcelona Convention and its Protocols should examine the final version of the LC/LP document ‘Guidance for Selecting Sites for Sea Disposal and for Developing Site Management and Monitoring Plans’ when it is available. They should then assess their national needs and consider whether there is a need to develop a revised version for the purposes of the Dumping Protocol or capacity building via showcasing best practices. This has been included in the Compendium of Best Practices (document UNEP/MED WG.487/4).